

- 15 -

CLAIMS:

1. An automatic valve intended for installation in the inlet of a thermostatic mixing device, comprising:

5 a tubular body (1) intended to be inserted in or constitute part of a pipe or connection for water supply, said body (1) having a holding seat (2);

10 a cursor (3) that can be moved in said body (1) with respect to said seat (2) between a first position in which it at least partly occludes said seat (2), and a second position in which it leaves said seat (2) substantially clear to permit the passage of a relatively large flow rate, said cursor (3) being subjected, on the one hand, to the pressure of the water supply pipeline and, on the other hand, to the pressure existing inside said mixing device; and

15 a spring (6) that works on said cursor (3), pushing it toward said first position, said spring (6) being dimensioned so that said cursor (3), with respect to said seat (2),

20 will assume said first position or a position close to it under conditions in which the water flow demanded by said mixing device is relatively low, and

25 will be shifted toward said second position or until it reaches it under conditions in which the water flow demanded by said mixing device is relatively high;

wherein said cursor (3) comprises means (4, 5', 9) which, when said cursor (3) assumes said first position or a position close to it, permit the passage of a flow rate sufficient only to supply a mixing device with a relatively low water flow demand.

30

2. Automatic valve according to Claim 1, wherein said cursor (3) in said first position totally occludes said seat (2) so

- 16 -

that the valve will also work as a nonreturn valve.

3. Automatic valve according to Claim 1, wherein an element (7) intended to act as nonreturn valve is inserted in it.

5

4. Automatic valve according to Claim 3, wherein said element (7), functioning as a nonreturn valve, consists of a flexible and elastic membrane, arranged so as to occlude at least one passage opening (4), while the flow tends to assume 10 a direction opposite to the normal direction.

5. Automatic valve according to one of Claims 1 to 4, wherein said cursor (3) has at least one opening (4) with small dimensions, intended to permit the passage of a flow 15 rate sufficient only to supply a mixing device with a relatively low water flow demand.

20

6. Automatic valve according to Claim 5, wherein at least one opening (4) with small dimensions is permanently pervious. 25
7. Automatic valve according to Claim 5, wherein said opening (4) with small dimensions is situated up the line from said seat (2) when said cursor (3) assumes said first position, and becomes pervious only when said cursor (3) undergoes a minor shift toward its second position.

8. Automatic valve according to one of Claims 1 to 4, wherein said cursor (3) comprises openings (5) with large dimensions which are situated up the line from said seat (2) 30 when said cursor (3) assumes said first position or a position close to it, and which become pervious when said cursor (3) shifts toward its second position or reaches it.

- 17 -

9. Automatic valve according to Claim 8, wherein said openings (5') with large dimensions have a tapered form so as to become pervious in an increasing manner, along with the increase in the shift of said cursor (3) from said first position to said second position.

10. Automatic valve according to Claim 9, wherein said openings (5') with the tapered shape are situated entirely up the line from said seat (2) when said cursor (3) assumes said first position so that the valve will also work as a nonreturn valve.

11. Automatic valve according to one of Claims 1 to 10, wherein said cursor (3) has a holding packing (8), acting in said first position with respect to said seat (2), and whose removal, when said cursor (3) is shifted toward said second position, clears wide passage cross-sections.

12. Automatic valve according to one of Claims 1 to 4, wherein a known flow rate regulator (9) is mounted in said cursor (3), whose substantially constant flow rate is adapted to the anticipated supply flow rate of a mixing device with a relatively low water flow demand.

13. Automatic valve according to Claim 12, wherein said flow rate regulator (9) is of a type provided with means that act as nonreturn valve.

14. Automatic valve according to one of the preceding claims, which is installed in both water supply pipelines of a thermostatic mixing device.

68/142 PCT

REPLACEMENT SHEET

PCT/EP00/07353

- 18 -

✓ 15. Automatic valve according to one of Claims 1 to 13, which is installed in only one of the water supply pipelines of a thermostatic mixing device.

5

✓ 16. Automatic valve according to Claim 15, which is installed in the cold water supply pipeline going to a thermostatic mixing device.

SEARCHED
INDEXED
COPIED
FILED
JULY 2001

10 *Now* 17. Thermostatic mixing device which is provided with at least one automatic stabilization valve according to one or several of the preceding claims.

AMENDED SHEET